

### ABSTRACT OF THE DISCLOSURE

AAV Rep78 mutants comprising a modified AAV Rep78 protein that possesses different biochemical and biological functions, particularly, the AAV Rep78 mutants that bind to at least one of a papillomavirus DNA or an AAV DNA or an oncogene or HIV DNA differently as compared to the wild-type AAV Rep78 protein, assays to select such mutants, and pharmaceutical compositions containing the AAV Rep78 mutants are disclosed. The present invention additionally is directed to a method of inhibiting papillomavirus associated diseases comprising administering pharmaceutical compositions containing AAV Rep78 mutants. Further disclosed is a method of inhibiting papillomavirus-associated diseases, cancer, and HIV-associated diseases comprising administering a pharmaceutical composition comprising a wild-type AAV Rep78 or a mutant thereof to a patient afflicted with a papillomavirus-associated disease, cancer, or HIV-associated diseases. Particularly, useful in treating papillomavirus-associated diseases are the AAV Rep78 or mutant thereof that binds to nucleotides 14-56 of p97 of HPV-16 and inhibits expression of HPV oncoproteins.